REMARKS

Reconsideration of the outstanding Office Action dated October 18, 2002 is respectfully solicited.

By this Amendment, claims 12, 13, 16, 17, and 18 have been cancelled. Accordingly, the Claims objections in paragraph "1." of page 2 of the Office Action are moot with respect to Claims 23-24.

In paragraph 2., on page 2 of the outstanding Office Action the U.S. Patent and Trademark Office [hereinafter PTO] presented three optional ways to overcome an objection in which the PTO characterized claims 30 and 37 as improper dependent claims; claims 30 and 37 were written in the independent form. The PTO's third option was to rewrite claims 30 and 37 in the independent form [which would require a fee under the present circumstances]; accordingly, a fee is enclosed. Applicants' revision of the claims is to moot the issues.

In paragraphs 3 & 4 of the Office Action the PTO has advanced rejections under 35 U.S.C. 112. Applicants respectfully traverse the rejections under 35 U.S.C. 112. With respect to Claims 12-13 and 16-18 these rejections are moot, in view of cancellation of those claims. Claims 21, 29, 30, 36, 37 and 42, have been amended in the manner suggested by the Examiner to reduce the issues.

In accordance with the Examiner's suggestions, in the outstanding Office Action, claims 21, 29 36 and 42 have been amended, and Claims 30 and 37 have been rewritten in the independent form. A marked up version of the amended claims is attached hereto.

In applicants' view the subject matter of the claims is patentable. The claims herein are directed to a method for treating a propellant powder. Applicants do not simply claim a combination of old components. Applicants method involves coating a powder of a propellant

with certain reagents. The applicants invention is directed to producing a propellant powder which maximizes the efficiency of the weapon over the entire temperature range for which the weapon is designed over the broadest possible temperature range. The mechanism involved is discussed, in the specification, at page 2 line 6 et seq. and at page 4 in the SUMMARY.

Applicants traverse the rejections under 35 U.S.C.102 in view of the express statements in MPEP Section 2131. The MPEP Section 2131 contains the following heading,

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM

Case law is advanced in the MPEP to support that principle. The Claims herein are patentable under all of the guidelines set forth therein concerning Section 102.

In applicants' view, none of the art describes surface coating a propellant; none of the art teaches a coating on a powder of a propellant material. In short, whether the Examiner views the of the restriction requirement entered as final in this case appears irrelevant, since the applied art does not describe or suggest the claimed method or its product.

Applicants respectfully traverse the rejections based on U.S. Patent Nos.

Applicants respectfully traverse the rejections based on U.S. Patent Nos. 5,682,009; 5,520,757 and 5,801,325, in paragraphs 5 -7 of the outstanding Office Action. The aforementioned substances, in particular the surface-coating agent listed in the rejected independent claims, do not follow from the applied prior art descriptions. The novelty of these agents is therefore undisputed.

U.S. Patent 5,682,009 relates to surface coating agents. However, the agents of this reference consist of other materials than those used by applicants. The applicants' composition of surface coating agents, and the mono-, di- and tri-basic propellant bulk powders, does not follow from this reference.

Also, the independent claims are novel as compared to the cited reference U.S. 5,520,757 because this reference discloses a completely different method. The aforementioned reference deals with the production of a base material for the propellant powder and not with a surface treatment which influences the burning behavior. Applicants claim the use of nitratoethylnitramines as surface coating agent for various propellants. These can be monobasic or multi-basic. The cited reference does not provide any suggestions for treating the surfaces of propellant powders.

U.S. 5,801,325 also deals only with the composition for a propellant powder as propellant, for which no plasticizing agent is claimed. In contrast, surface treatment agents are claimed in our independent method claims.

In this prior art, the propellant powder is provided with an energetic binder, to be sure, but as a crystalline component. In the application, applicants use a polymer for the surface coating, for example, which basically has nothing to do with an energetic binder. Thus, **"mixing" should not be equated with "surface-treating,"** because the prior art claims a homogeneous composition, which cannot be produced with applicants' method. In other words "mixing" and "surface-treating" are two different manipulations. It is furthermore not applicants' intention to produce the prior art homogeneous compositions. The aforementioned reference does not disclose a surface treatment. This difference alone vitiates the rejection under 35 U.S.C. 102 [MPEP 2131]. Moreover applicants do not claim powder recipes for a homogeneous propellant powder production.

In applicants' view, the PTO statement and position concerning U.S. 5,801,325 do not appear accurate as the U.S. 5,801,325 contains only references to the propellant bonding. The PTO statements with respect to the surface coating are therefore believed not to reflect the facts.

U.S. 5,682,009 cannot suggest applicants' claims because this reference primarily deals with the production of ball powder, for which NC powder is dripped into a watery solution. In contrast, the surface coating according to applicants' invention is realized by spraying it on in the manner known per se.

Even though the application and U.S. 5,682,009 provide a watery solution of the coating agent, the U.S. patent method pursues a different goal. That is to say, the coating for this reference is intended to generate an impregnation method, for which the impregnation can undertake only at an elevated temperature. According to applicants' invention, the coating is realized at a uniform spraying temperature.

In paragraphs 9-12 of October 2001 Office Action. References US 5 529 649 and 5 798 481 are newly cited and newly applied in combination with other references under Section 103(a).

Neither of the aforementioned references relates to the content of the claims 21, 29 and 36 that are pending since neither of these references discloses a surface coating for a propellant charge. In contrast to the subject matter of the aforementioned claims in the application, the US-PS 5 529 649 discloses an explosive material and not a propellant charge embedded in a polymeric binder.

The polymeric binder in this reference exclusively functions as binder and not as combustion moderator. Claim 9 lists another difference to the subject matter of our application, for example, in that the binder amounts to 10 and 30% of the explosive material. A further difference is that the binder is present throughout the explosive material to combine the same. Thus, the agents listed in claims 16 to 18 are uniformly distributed over the complete cross section in the explosive material. A surface coating is not intended in this case. The explosive

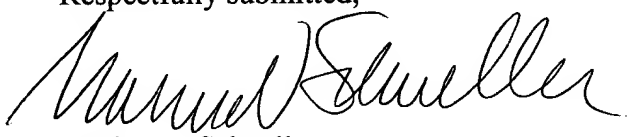
material in this case is not a propellant charge and, furthermore, is not a propellant charge with surface coating.

The cited reference US-PS 5 798 481 also discloses a material composition, wherein the material is uniformly distributed over the complete cross section, and is not a surface coating. The softener [or plasticizer] disclosed therein amounts to 5 – 30%, which also deviates from the subject matter of our application.

Each of the those newly cited and newly applied references is combined with references applied under Section 102 [in paragraphs 6-7 of the Office Action.] However, as noted above, the references applied under 35 U.S.C. 102 fail to satisfy the case law precedent which is adopted by MPEP Section 2131 for definition of the disclosure requirement(s) of a reference applied under 35 U.S.C. 102. The newly applied references also fail to make up for the deficiencies of the references applied by the PTO under 35 U.S.C. 102. Thus, there are differences between the references applied under Section 102 and the pending claims. Moreover, the references combined with references, advanced by the PTO under Section 102, do not disclose those differences. They do not disclose surface coating of propellant(s) powder.

Reconsideration and an early allowance are respectfully solicited.

Respectfully submitted,



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APPENDIX – MARKED UP VERSION OF CLAIM AMENDMENTS

--21. (TWICE AMENDED) A method for producing a propellant powder for gun ammunition, comprising surface-treating a mono-, di-, and tri-basic propellant powder with at least one polymer selected from the group consisting of polyether, polyurea, polybutadiene or [and] polyamide.--

--29. (TWICE AMENDED) A method for producing a propellant powder for gun ammunition, comprising surface-treating a mono-, di-, and tri-basic propellant powder with at least one polymer selected from the group consisting of poly-3-nitratomethyl-3-methyl oxetane, [and] or glycidylazide polymer.—

--30. [AMENDED] A method for producing a propellant powder for gun ammunition, comprising surface-treating a propellant powder with at least one polymer selected from the group consisting of poly-3-nitratomethyl-3-methyl oxetane, polyglycidylnitrate, or glycidylazide polymer, [The method of Claim 29], wherein the propellant is at least one of mono-, di- [and] or tri-basic propellants for gun ammunition.--

--36. (TWICE AMENDED) A method for producing a propellant powder for gun ammunition, comprising surface-treating a mono-, di-, and tri-basic propellant powder with at least one [of] energetic, monomer softener which is an alkyl nitrato ethyl nitramine, bis(2,2-dinitropropyl) acetal, bis(2,2-dinitropropyl) formal, [and] or dinitrodiazaalkane.—

---37. [AMENDED] A method for producing a propellant powder for gun ammunition, comprising surface-treating a propellant powder with at least one of alkyl nitrato ethyl nitramine, nitric acid ester; bis(2,2-dinitropropyl) acetal, bis(2,2-dinitropropyl) formal, or dinitrodiazaalkane [The method of Claim 36], wherein the propellant is at least one of mono-, di- [and] or tri-basic propellants for gun ammunition.--

--42.[AMENDED] The method of Claim 36, wherein a [the] polymer and [an] the energetic, monomer softener [components] are applied as a mixture [of the two components] or by a two-stage, consecutive treatment.--